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(54) **DEVICE TO PROTECT LIGHT STRINGS FOR STORAGE**

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(58) **Field of Search** 206/388, 408, 206/410, 418–422, 702; 248/317, 320; 362/227, 234, 249

(56) **References Cited**

U.S. PATENT DOCUMENTS

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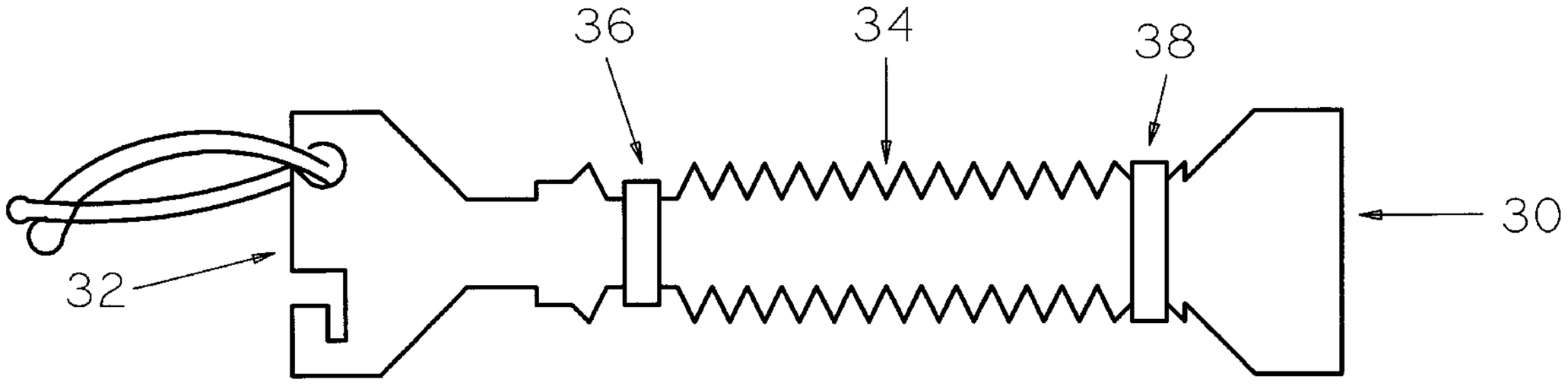
(57) **ABSTRACT**

The invention is a device for quickly and easily protecting decorative light strings, such as Christmas lights, for storage. The stored light strings are protected against damage, and are immediately ready for re-use without tangling.

7 Claims, 1 Drawing Sheet



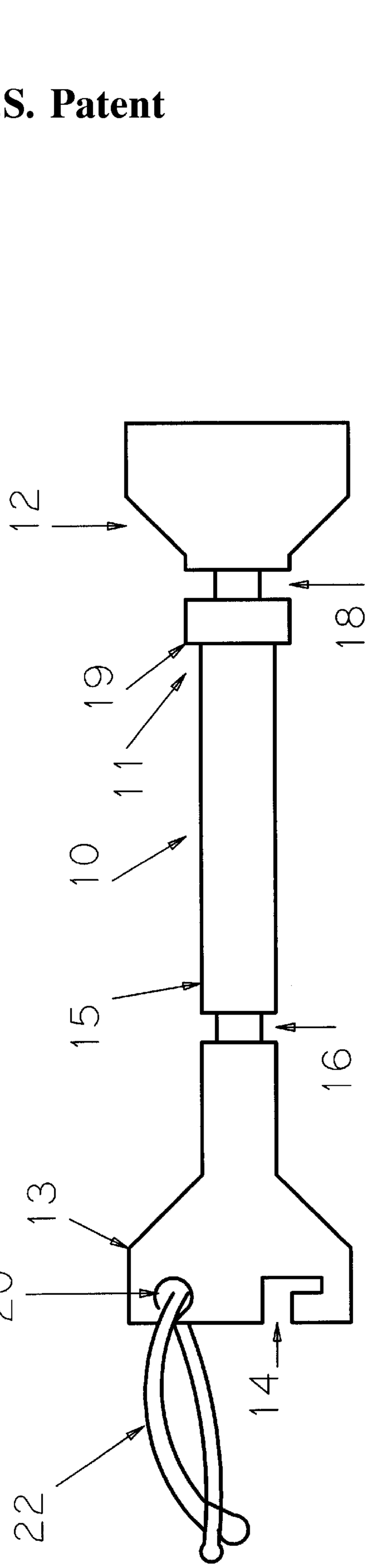


FIG. 1A

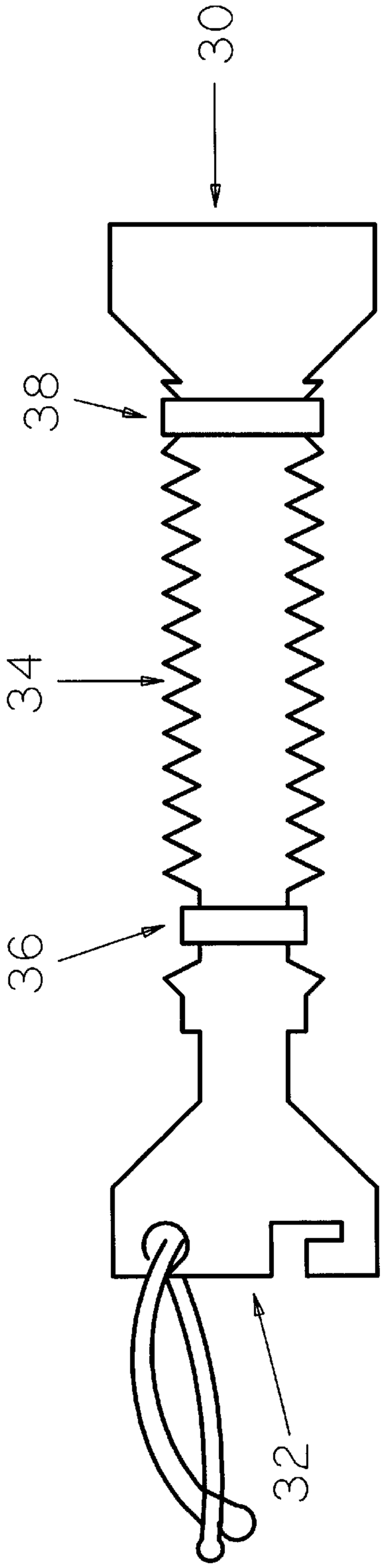


FIG. 1B

DEVICE TO PROTECT LIGHT STRINGS FOR STORAGE

FIELD OF THE INVENTION

The invention concerns a device for preparing light strings, such as Christmas lights, for tangle-free storage and easy re-use.

BACKGROUND OF THE INVENTION

Decorative light strings are used in a wide variety of applications, such as non-seasonal store displays. One of their widest uses is as Christmas lights, when they are used to decorate yards, fences, and houses and other structures. However, this seasonal use of such light strings requires that the light strings be stored for much of the year. In storage, the light strings tend to become tangled, resulting in wasted time involved in untangling the light strings before they can be re-hung as Christmas approaches. The tangling can become so severe that the light string must be thrown away as unusable. These tangling problems are more severe with newer, and very popular, light strings such as icicle lights.

To provide a solution to the tangling and storage problem, various devices for storing light strings have been suggested. These devices often involve a flat card or base around which the light string must be meticulously wound. For example, U.S. Pat. No. 5,317,491 to Lee discloses a flat, stiff mounting plate with integrated, uniformly-spaced slotted tabs, allowing for the light string wire to be wound around the plate and the lights to be inserted into the slots.

Similarly, U.S. Pat. No. 5,526,931 to White discloses a slotted base card with swivel-pivots, so that the card may be axially rotated to wind and un-wind the light string on the card. In White, slots in the card do not hold individual sockets. Rather, they provide saddles for the wire to fit into to prevent its slipping off of the card. White additionally discloses integrated holes in the card to allow the card to be hung on hooks for storage. However, the light string must be wound onto the card manually, and must be unwound for re-use.

U.S. Pat. No. 5,064,067 to McAllister, et al., discloses a generally rectangular frame around which a light string can be would, with tooth-like projections at the edges of the frame to prevent the wire from slipping. Unlike White, the teeth of the device disclosed in McAllister, et al. are narrowly spaced, and require that the light string be wound with only one loop between each pair of teeth. Thus the light string must be carefully wound about the frame to utilize each available gap and avoid wasting space. The device of McAllister, et al., additionally discloses the use of an integral hook to hang the frame for storage. As with the device of White, the light string must be manually wound and un-wound from the frame.

Each of these devices provides some means for storing light strings, but each requires effort on the user's part to properly wind the light string about the device, and in some cases, to insert individual light sockets into slots. Further, these devices do not provide protection for multiple, dangling, sub-strings, such as those found on icicle lights. Accordingly, it is desirable to provide a device to allow consumers to quickly and easily prepare light strings for storage in a way which prevents tangling and protects the lights against breakage.

It is a goal of the invention to provide a device to quickly prepare light strings for storage.

It is a further goal of the invention to allow light strings to be quickly removed from storage and to be prepared for re-hanging.

It is another goal of the invention to protect light strings against breakage and tangling while in storage.

SUMMARY OF THE INVENTION

The invention provides a device for rapidly enclosing a light string in an extensible sheath, such as a flexible lightweight plastic tube. Once it is so enclosed, the light string may be coiled, un-coiled, and re-coiled without becoming tangled. Such an enclosed light string may be stored by laying it down or hanging it on the wall in a coil. The enclosure of the light string in a plastic tube provides some protection against breakage during storage. Additional protection can be provided by placing the enclosed light string in a box, such as a cardboard box, from which the enclosed light string can be quickly removed and prepared for re-use.

The invention comprises a base unit and an extensible sheath, each having a longitundinal axis, with the base unit inserted through the sheath in its compressed form so that their longitudinal axes are essentially aligned. The base unit additionally comprises a coupler capable of securely holding one end of the light string to be stored. In operation, one end of the light string is attached to the coupler so that the sheath may be extended to surround and protect the length of the light string. Depending on the positioning of the coupler, a short portion of the light string may be left uncovered until the light string is decoupled from the base unit and the sheath is extended further to cover this final portion. The invention preferably comprises a restraint which can be used to hold the base unit in position while the sheath is being extended, so that a single person can perform the entire process of enclosing the light string.

In the preferred embodiment, the base unit comprises flared ends to prevent the sheath from slipping off of the base unit prematurely. Also in the preferred embodiment, one of the ends of the base unit is removably attachable to the base unit, so that the removable end may be used as a guide to direct the light string into the sheath. The base unit further preferably comprises depressions or slots, into which fasteners such as rubber bands or strips tightenable with Velcro™ may be seated over the ends of the extensible sheath to further prevent unwanted slippage of the extensible sheath.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1A** is side view of the preferred embodiment of the invention, without the extensible sheath in place.

FIG. **1B** is side view of the preferred embodiment of the invention, with the extensible sheath in place.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. **1A** and **1B**, the invention comprises a base unit **10**, having a first end **11** and a second end **13**. In the preferred embodiment, the base unit **10** comprises a base unit body **15**, and the first end **11** of the base unit **10** comprises a removable first sleeve **12**. The base unit body **15** may comprise either a hollow tube or a solid body.

A coupler **14** allows one end of the light string (not shown) which is to be covered to be restrained by securing it in the coupler **14**. If the base unit body **15** is hollow, the end of the light string to be secured may be fed into the opening **30** at the first end **11** of the base unit **10**, through the base unit **10**, and out of the opening **32** at the second end **13** of the base unit **10**, where it is inserted into the coupler **14**.

Alternatively, the first removable sleeve may be removed from the base unit body **15**, and the end of the light string may be fed into the opening **30** at the first end **11**, through the first removable sleeve **12**, and along the outside of the base unit body **15** to be secured in the coupler **14**. The coupler **14** is preferably a slot, to allow the electrical plug on the end of the light string to be captured and held securely. However, those of skill in the art will recognize that other couplers, such as spring clips or ties which may be securely fastened to the base unit body **15**, will also work effectively.

Those of skill in the art will recognize that variations of this arrangement are possible. If the base unit body **15** is a solid, rather than a hollow, body the coupler **14** could be placed at or near the first end **11** of the base unit **10**, and the light string attached there rather than extending through or along the base unit **10**.

The removable first sleeve **12** is preferably attached to the base unit **10** by means of a slip-on collar **19**, which allows the removable first sleeve **12** to be readily placed on or taken off of the base unit body **15**. The base unit **10** may also comprise slots **16** and **18** which allow the extensible sheath **34** to be restrained by means of removable holders **36** and **38** which loop around the outside of the extensible sheath **34** and seat into slots **16** and **18**. Those of skill in the art will recognize that removable holders **36** and **38** may be comprised of various available products, such as rubber bands or cloth strips whose ends are tightened together with Velcro™. Slot **18** is preferably located on removable first sleeve **12** so that removable first sleeve **12** can be used as a guide to extend the extensible sheath **34** along the length of the light string.

The invention also preferably comprises a restraint **22**, such as a looped lanyard, which is attachable to the second end **13** of the base unit **10** by looping it though a hole **20**. The restraint **22** may be secured to a doorknob or any other securely stationary object to hold the base unit **10** in position while the extensible sheath **34** is being extended to cover the light string, thereby allowing a single person to easily complete the task of covering the light string.

In operation, a user would remove the first removable sleeve **12** from the base unit **10** and slide the extensible sheath **34** into position around the first removable sleeve **12**, securing the extensible sheath **34** to the first removable sleeve **12** by use of removable holder **38**. The user will feed the end of the light string to be protected through the opening **30** in the first end **11** of the base unit **10**, through the first removable sleeve **12**, secure it into the coupler **14**. The user will then slide the extensible sheath **34** over the base unit body **15** and secure the extensible sheath **34** to the base unit body **15** with removable holder **36**.

The user will then secure the restraint **22** to a doorknob or other securely stationary object, remove the first removable sleeve **12** from the base unit **10**, and walk down the length of the light string, using the first removable sleeve **12** as a guide to direct the light string into the extensible sleeve **34**, which will extend along with the first removable sleeve **12** because: it is secured by removable holder **38**. When the entire length of the light string is enclosed, the first removable sleeve **12** is released from the extensible sheath **34** by removing removable holder **38**. The light string is then released from coupler **14** and the extensible sheath **34** is extended an additional distance until the end of the light string is clear of the base unit body **15** and fully enclosed by the extensible sheath **34**. If necessary, the extensible sheath **34** can then be cut, and any remainder still on the base unit body **15** will be available for further use, or the entire remainder of the extensible sheath **34** can be removed from the base unit body **15**.

I claim:

1. A device for use in covering light strings, comprising

a base unit having a first end and a second end,

an extensible sheath, wherein said extensible sheath is releasably restrained on said base unit, and

a coupler integrable with said base unit, wherein said coupler is attachable to an end of a light string.

2. The device of claim **1**, wherein said device for covering light strings additionally comprises

a restraint, wherein said restraint is attachable to said base unit and useable to hold said base unit securely in position during use.

3. The device of claim **1**, wherein said coupler comprises a slot formed in said

base unit.

4. The device of claim **1**, wherein said base unit comprises a tube.

5. The device of claim **1**, wherein said base unit comprises a solid body.

6. The device of claim **1**, wherein said first end comprises a first removable sleeve

which is removably attachable to the remainder of said base unit.

7. The device of claim **6**, wherein said extensible sheath is removably attachable to said

first removable sleeve.

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